

**Climatological Data for December, 1910.**  
**DISTRICT No. 7, LOWER MISSISSIPPI VALLEY.**

ISAAC M. CLINE, District Editor.

**GENERAL SUMMARY.**

Temperature conditions were generally moderate during the first few days of the month. From the 6th to 8th a cold wave overspread the district, giving frost to the Gulf coast and minimum temperatures below  $20^{\circ}$  as far south as northern Louisiana. From the 9th to 11th moderate temperatures were general, but from the 12th until the 15th another cool period prevailed. Seasonable temperatures were general from the 18th to 22d, followed by another marked cool period on the 23d and 24th. From the 25th to 28th, unseasonably warm weather prevailed, but on the closing days of the month a cool wave occurred, giving freezing as far south as central Louisiana and frosts to the Gulf Coast.

Periods of precipitation were not well defined, and it is not possible to generalize the periods for the district as a whole. In the Colorado area there were four periods of light precipitation, as follows: 3d-4th, 20th-22d, and 25th to 28th. Over the New Mexico area there was practically no precipitation during the first 13 days of the month, but during the last 18 days there were three periods of light scattered precipitation, namely: 14th, 20th-21st, and 26th to 29th. In the Texas area there were three periods of precipitation: 12th to 14th, 20th to 23d, and 28th to 30th. In Oklahoma and the Kansas area, precipitation occurred generally during four periods, as follows: 4th-5th, 13th-15th, 21st, and 27th to 30th. In the Missouri and Tennessee areas there were three periods of precipitation, namely: 4th to 6th, 21st to 23d, and 27th to 30th. In Arkansas there were four periods of general precipitation: 4th to 6th, 12th to 15th, 22d and 23d, and 26th to 30th. Over Louisiana and in the Mississippi area the periods were ill defined, and some precipitation occurred at one or more stations on every day of the month, except the 1st and 25th. The precipitation was light, as a rule, being below the normal, except in some localities in Louisiana and southern Arkansas. Over Oklahoma, Kansas, eastern Colorado, northeastern New Mexico, and northwestern Texas the amounts of precipitation were very small, and some localities received no rain. In those localities the drought was severe at the close of the month and farming operations were being materially interfered with.

**TEMPERATURE.**

Mean temperatures for the month were from  $0.1^{\circ}$  to  $3.9^{\circ}$  above the the normal generally to the west of the 95th meridian, but east of this meridian there was a general deficiency ranging from  $0.2^{\circ}$  to  $5.2^{\circ}$ , except in Louisiana, where there was a small excess at the majority of the stations. The maximum temperatures reached, or exceeded,  $75^{\circ}$  in all States and areas, and  $80^{\circ}$ , or higher, was recorded in many localities, except in the Missouri and Tennessee areas, where the highest temperatures recorded were  $67^{\circ}$  and  $70^{\circ}$ , respectively. The highest temperatures were experienced in Oklahoma and Louisiana and in the Colorado and Texas areas. The highest recorded was  $85^{\circ}$ , at Hoehne, Colo., and Donaldsonville, La. Minimum temperatures for the month were generally below freezing, except on the immediate Gulf Coast, where they were near  $35^{\circ}$ . The lowest temperatures were below  $20^{\circ}$  in portions of Mississippi and northern Louisiana, while over the remainder of the district they were generally below  $10^{\circ}$ , and in the mountainous parts of the Colorado and New Mexico areas they were generally below zero. The lowest temperature recorded during the month

was  $-8^{\circ}$ , at Hoehne, Colo., and Elizabethtown, N. Mex., and a minimum of  $-5^{\circ}$  occurred at Ironton, Mo. As a whole, temperature conditions during the month were moderate and outdoor occupations were not interfered with to any appreciable extent by severe cold. Monthly mean temperatures and departures from the normal for the various States and parts of States are reported as follows: Colorado area,  $31.2^{\circ}$ ,  $+3.1^{\circ}$ ; New Mexico area,  $35.5^{\circ}$ ,  $+2.2^{\circ}$ ; Texas area,  $40.6^{\circ}$ ,  $-0.3^{\circ}$ ; Kansas area,  $34.2^{\circ}$ ,  $+0.3^{\circ}$ ; Oklahoma,  $39.6^{\circ}$ ,  $-0.1^{\circ}$ ; Missouri area,  $34.1^{\circ}$ ,  $-1.8^{\circ}$ ; Tennessee area,  $37.1^{\circ}$ ,  $-3.7^{\circ}$ ; Arkansas,  $40.8^{\circ}$ ,  $-1.7^{\circ}$ ; Mississippi area,  $44.5^{\circ}$ ,  $-2.6^{\circ}$ ; Louisiana,  $52.2^{\circ}$ ,  $+0.4^{\circ}$ .

**PRECIPITATION BY DRAINAGE AREAS.**

*Arkansas River and tributaries.*—Less than the normal amount of precipitation occurred throughout this drainage area, except in scattered localities in Colorado and Arkansas. The amounts of precipitation and departures from the normal for the several valleys of this basin differ materially. Over the headwaters of the Arkansas River, in Colorado, the average from 33 stations was 0.55 inch, being about 0.2 inch below the normal. The precipitation was exceptionally light over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma and also over the Cimarron and Canadian valleys. The average from 38 stations in that portion of the Arkansas Valley proper in Kansas and Oklahoma was 0.41 inch, being 0.6 inch below the normal. The average from 17 stations in the Cimarron Valley was 0.12 inch, and the deficiency amounted to about 0.7 inch. Over those portions of the Canadian Valley that lie in New Mexico and Texas the average from 42 stations was 0.11 inch, being about 0.4 below the normal. Over that portion of this valley that lies in Oklahoma, the average from 20 stations was 0.20 inch and the deficiency amounted to 1.4 inch. The precipitation was somewhat heavier over the Verdigris and Neosho valleys. The average from 9 stations in the Verdigris Valley was 0.93 inch, being about 0.3 inch below the normal, and the average from 17 stations in the Neosho Valley was 1.0 inch, being about 0.8 inch below the normal. Over that portion of the Arkansas Valley below the Oklahoma-Arkansas line the precipitation was unevenly distributed, the average from 14 stations being 3.06 inches, about 0.8 inch below the normal.

*Red River and tributaries.*—There was less than the normal amount of precipitation generally over those portions of the Red River Valley that lie in New Mexico, Texas, and Oklahoma, where the amounts from 41 stations averaged 1.02 inch, being about 0.6 inch below the normal. Over that portion of the Red River Valley below the Texas-Arkansas line the precipitation was uniformly distributed, the average from 16 stations being 4.62 inches, about the normal amount.

*Mississippi south of St. Louis and small tributaries.*—Less than the normal amount of precipitation occurred over this drainage area, except in scattered localities. In the immediate Mississippi Valley, the amounts from 41 stations averaged 3.39 inches, being about 0.6 inch below the normal. The precipitation averaged about 1.50 inch over the Meramec and the average deficiency was about 1.0 inch. Over the White River Valley, the average from 19 stations was 2.73 inches, being about 0.6 inch below the normal. The precipitation was uniformly distributed over the Yazoo and Big Black Valleys; the average from 30 stations in the Yazoo Valley was 3.63 inches, being about 1.0 inch below the

normal, and the average from 4 stations in the Valley of the Big Black was 3.48 inches, the deficiency being about 1.3 inch. The precipitation was unevenly distributed over the Ouachita Valley, some localities reporting more than 1 inch excess and others more than 1 inch deficiency; the average from 20 stations was 4.31 inches, about the normal amount.

*Louisiana coastal plain.*—Moderate to heavy rains fell generally over this area, the average from 27 stations being 4.15 inches, about 0.5 inch below the normal. The greatest excess was 2.88 inches and the greatest deficiency was 2.62 inches.

Monthly precipitation and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 0.55, -0.23; New Mexico area, 0.14, -0.37; Texas area, 1.26, -0.53; Kansas area, 0.54, -0.36; Oklahoma, 0.36, -1.01; Missouri area, 1.96, -0.76; Tennessee area, 3.85, -0.53; Arkansas, 3.57, -0.45; Mississippi area, 3.69, -1.17; Louisiana, 4.30, -0.45.

#### SNOWFALL.

Snow occurred generally over the district to the north of the 34th parallel. In the Tennessee and Missouri areas, and in northeastern Arkansas, the amounts were quite large, ranging generally from 5 to 8 inches, but the snow soon disappeared, and at the close of the month there was none on the ground. In Oklahoma and the Kansas and Texas areas, and the eastern portions of the Colorado and New Mexico areas, the amounts were generally small, ranging from a trace to 3 inches, except that there was 3 to 7 inches over the northeastern portion of the Kansas area. In the mountains of Colorado, the season's snowfall up to December 31 was much less than for the corresponding period last year, and as a whole, much less than the normal. In a few localities on the different watersheds, nearly the average amount of snow occurred, but the areas thus favored were too small to make up for the general and marked deficiency in the water stored for late irrigation. The snow is generally unpacked and owing to the absence of high winds, there has been but little drifting into the gulches. Over the New Mexico area the snowfall was much lighter than usual, and considerably less than in 1909. The warm weather left the mesas and lower mountains generally bare until the 26th and 27th, when snow occurred generally, but it was light, except in the higher mountain districts. The present outlook for water for irrigation is not very promising, because the light winds have been unfavorable for drifting into the canyons, and the warm weather has dissipated a large part of that which has fallen. The average snowfall, in inches, for the various States and areas, derived from such stations as reported snow, is as follows: Colorado area (30 stations), 9.5; New Mexico area (35 stations), 1.9; Texas area (6 stations), 0.2; Kansas area (52 stations), 1.2; Oklahoma (23 stations), 0.2; Missouri area (22 stations), 4.1; Tennessee area (10 stations), 2.0; Arkansas (34 stations), 1.3; Mississippi area (17 stations), 0.2.

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#### RIVERS.

In Oklahoma all streams were at unusually low stages at the close of the month. The Canadian continued dry over a considerable portion of its bed and many of the small streams in the central and western portions of the State have been dry for six weeks to two months.

Only slight changes occurred in the Red River and low stages prevailed generally at the close of the month. No material changes occurred during the month in the Arkansas. At Little Rock the water fell to the unprecedented low stage of 0.9 foot below zero. The stage was below zero until the 29th, when a rise set in and on the 31st, the stage was 2.0 feet above zero. At Pine Bluff a stage of 6.6 feet was reached at the close of the month. Navigation was suspended, except that on the last two days of the month light draft boats came up the river as far as Robb Roy Bridge near Pine Bluff.

Low stages prevailed in the White River during the first and second decades, but there was a rise at Clarendon during the third decade and a stage of 12.6 feet was recorded on the 31st. The lower White was navigable during the greater part of the month.

With the exception of a rise of 8 feet at Camden on the last day of the month, the Ouachita was low and nearly stationary throughout the month.

Below St. Louis the Mississippi rose at Memphis until the 16th; Helena until the 17th; Arkansas City until the 19th; Vicksburg until the 21st; Natchez until the 25th; and at New Orleans until the 29th. The rises were slight and comparatively low stages prevailed generally at the close of the month.

#### NOTES.

*New Mexico* (Chas. E. Linney, Section Director).—The weather during the month was the driest of record, there being no precipitation at many stations in the east portion.

*Tulia, Tex.*—Dry weather prevailed and as a result prospects for wheat are poor.

*Wichita, Kans.* (Richard H. Sullivan, Local Forecaster).—The only precipitation of consequence during the month was 0.58 inch on the 27th. The year was the driest on record with 17.72 inches; the least amount previously recorded being 18.19 inches in 1893.

*Frederick, Okla.*—There is not much moisture in the ground and very little preparation has been made for spring planting.

*Hobart, Okla.*—Very little winter wheat has survived the drought and a large acreage will be plowed under and planted in cotton. Stock water has given out, except in a few sections and many wells are dry.

*Blackburn, Okla.*—Rain is badly needed; live stock is suffering in some localities.

*Oklahoma* (J. Pemberton Slaughter, Section Director).—The long continued drought has greatly damaged the wheat crop; the acreage has been reduced and the stand is probably the poorest in the history of the State.

## MONTHLY WEATHER REVIEW.

DECEMBER, 1910

TABLE 1.—Climatological data for December, 1910. District No. 7, Lower Mississippi Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.				
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>Colorado.</i>																						
Blaine.	Baca.	3,935	18	34.8	+ 1.8	70	9	9	23†	51	T.	- 0.62	T.	T.	0	12	11	8	nw.	M. M. Myers.		
Buena Vista.	Chaffee.	7,955	10	28.7		55	19	0	30	43	0.92	+ 0.50	0.40	12.0	3	22	6	3	nw.	C. A. Short.		
Calhan.	El Paso.	6,700	3	30.6		56	9	2	23	41	0.54		0.33	10.0	2	23	5	3	sw.	H. B. Rice.		
Canon City.	Fremont.	5,843	22	38.0	+ 0.7	65	9	14	23	40	0.19	- 0.24	0.19	1.0	1	25	3	3	n.	G. C. Sherwood.		
Colorado Springs.	El Paso.	6,098	30	32.6	+ 2.0	62	2	1	23	45	0.25	0.00	0.18	2.6	3	21	4	6	Colorado College.			
Cripple Creek.	Teller.	9,390	9								0.60	+ 0.21	0.36	15.0	4				n.	F. G. Willis.		
Cuchara Camps.	Huerfano.	8,200									0.66		0.31	6.5	4	18	11	2	sw.	George A. Mayes.		
Eads.	Kiowa.	4,209	3										0.36	14.2	4	15	15	1	ne.	W. H. Lauck.		
Fairview.	Custer.	9,500	1										0.20	11.9	7	15	11	5	w.	Elizabeth L. Gray.		
Florence.	Fremont.	5,185	1										0.65	24.0	7	21	4	6	U. S. Forest Service.			
Fremont Ex. Station.	El Paso.	8,850	28.6			52	1†	2	28	36	0.61								Lloyd N. Felton.			
Garfield.	Chaffee.	9,510																Clyde Bertotti.				
Glen Eyrie.	El Paso.	6,500	18															W. Hamp.				
Hamps.	Elbert.	5,400	17	31.0	+ 3.8	62	9	4	23	46	0.27	- 0.14	0.24	0.5	3	19	4	8	s.	John E. Graham.		
Hermit Lake.	Custer.	10,000											0.42	35.0	6	10	15	6	sw.	S. W. De Busk.		
Hoehne.	Las Animas.	5,700	18	39.4	+ 9.1	85	4†	3	23	78	0.02	- 0.75	0.02	1.0	1	14	12	5	sw.	Holly Sugar Co.		
Holly.	Prowers.	3,380	15	35.6	+ 3.5	67	26	7	6†	52	0.00	- 0.41	0.00	0.0	0	20	8	3	se.	Fred B. Mason.		
La Junta.	Otero.	4,052											0.00	0.0	0	24	1	6	e.	Clyde C. McReynolds.		
Lake Moraine.	El Paso.	10,265	16	24.9	+ 3.1	48	15	8	29	45	1.11	+ 0.46	0.42	19.6	6	10	11	11	sw.	J. T. Lawless.		
Lamar.	Prowers.	3,592	20	34.9	+ 2.1	62	3	3	30	51	T.	- 0.57	T.	T.	0	25	4	2	.....	F. M. Tague.		
Las Animas.	Bent.	3,899	42	33.6	+ 4.1	63	5†	4	30	55	0.00	- 0.30	0.00	0.0	0	20	2	9	e.	Marine D. Wright.		
La Veta Pass.	Costilla.	9,000											0.77		0.29	14.7	5	19	9	3	w.	Joseph Lindsey, Jr.
Leadville.	Lake.	10,248	14	21.4	+ 1.9	44	2	- 6	29	37	1.15	+ 0.08	0.29	20.7	10	9	14	8	n.	F. L. Palmer.		
Limon (near).	Elbert.	5,300	3	32.0		63	9	4	23	44	0.17		0.13	T.	0	21	7	5	s.	Thomas Sawyers.		
Madrid.	Las Animas.										0.12		0.12	3.0	1					William D. Lillard.		
Marshall Pass.	Saguache.	10,846	7								0.30		0.19	7.0	4	17	12	2	.....	James W. Ingmire.		
North Lake.	Las Animas.	8,700									0.62		0.50	6.5	2	22	8	1	nw.	U. S. Weather Bureau.		
Pueblo.	Pueblo.	4,734	22	34.4	+ 2.7	67	9	9	30	46	0.15	- 0.38	0.15	0.2	1	21	7	3	nw.	P. K. Blinn.		
Rocky Ford (near).	Otero.	4,177	21	33.2	+ 2.3	67	9	4	30	53	T.	- 0.43	T.	T.	0	26	3	2	.....	Daniel Clark.		
St. Elmo.	Chaffee.	9,500									0.92		0.26	12.3	5	15	9	7	nw.	M. D. L. Buell.		
Salida.	Kiowa.	7,035	12	30.9	+ 3.8	58	2	- 3	29	49	0.45	- 0.12	0.30	4.0	3	23	6	2	.....	Howard Gamble.		
Sheridan Lake.	Las Animas.	4,065	9								0.30		0.19	7.0	4	17	12	2	.....	J. W. Shouse.		
Stonewall.		8,000	4								0.06		0.06	2.0	1	25	4	2	.....	Agent E. P. & SW. R. R.		
Trinidad.		5,994	14	32.2		51	1†	3	29	36	0.96		0.48	18.2	5	28	3	2	e.	Andrew Knell.		
Victor (near).	Teller.	10,100	6	32.2							0.06	- 0.51	0.06	2.0	1	25	4	2	.....	Miss Carrie Konkel.		
Villas.	Villas.	3,935	19								0.00		0.48	18.2	5	28	3	2	.....	Zack Jordan.		
Westcliffe.	Custer.	7,864	16	28.4	+ 2.9	57	2	- 5	29	46	0.14	- 0.55	0.09	3.0	2	10	14	7	nw.	John G. Payne.		
Wimfield.	Chaffee.	9,765									0.05		0.40	10.7	8	17	8	2	.....	Geo. C. Worthman.		
Wortman.	Lake.	11,250	9								0.12		0.67	29.3	8	0	27	4	nw.	Agent E. P. & SW. R. R.		
<i>New Mexico.</i>																						
Abbott.	Mora.	5,771	1			67	9	3	29	29	0.13		0.09	1.5	2	20	6	5	s.	Agent E. P. & SW. R. R.		
Albert.	Union.	4,700	19	40.5	+ 1.5	70	9	12	30	40	T.	- 0.67	T.	T.	0	18	10	3	w.	Wm. A. Elliott.		
Arch (near).	Roosevelt.	4,634	1	33.6		69	9	9	2†	49	0.22		0.22	0.0	1	17	0	14	.....	Miss Juanita Lucero.		
Aurora.	Colfax.	8,849	1								0.31		0.20	9.0	4	3	28	0	nw.	C. M. O'Doud.		
Bell Ranch.	San Miguel.	4,500	11	38.4		70	11	10	30	48	0.03	- 0.41	0.03	T.	1	24	4	3	sw.	Ralph T. Martinez.		
Black Lake.	Colfax.	5,348	1								0.28		0.18	4.1	4	2	24	2	w.	Agent E. P. & SW. R. R.		
Cabeza.	San Miguel.	5,406	1								0.05		0.05	0.5	1	8	20	3	se.	Do.		
Campana.	Mora.	4,493	20								0.10		0.05	2.0	2	19	7	2	.....	Alfred Lucero.		
Chacon.		9,000	1								0.18		0.06	2.0	3	6	22	3	e.	Wm. French.		
Cimarron (near).	Colfax.	6,385	6	34.2		65	9	2	30	52	T.		T.	T.	0	12	12	10	.....	Dr. W. W. Chilton.		
Clayton.	Union.	5,178	5	38.8		66	6	12	30	36	T.		T.	T.	0	23	5	3	w.	C. R. Worrall.		
Clovis.		4,129																		Agent E. P. & SW. R. R.		
Cuervo.	Guadalupe.	4,849	1	41.6		70	9	17	29	38	0.01		0.01	T.	1	17	9	5	s.	Geo. T. Lambert.		
Dawson.	Colfax.	6,398	1								0.00		0.00	0.0	0	9	12	10	.....	Miss Mabel Carrington.		
Dorsey (near).		6,000	7	34.6		63	16	4	30	55	0.08		0.06	1.3	2	15	15	15	sw.	David Rose.		
Elizabethtown.		8,485	4	25.8		57	2	- 8	30	57	0.24		0.09	4.0	4	17	12	2	nw.	M. C. Needham.		
Folsom.	Union.	6,399	10	34.8	+ 4.6	64	2	4	29	47	0.40	- 0.35	0.30	4.0	2	23	8	0	sw.	James B. Dickson.		
Fort Union.	Mora.	6,885	50	32.3	- 1.4	64	1†	0	20†	50	0.23	- 0.29	0.15	3.0	2	24	4	3	w.	A. J. Meloche, Jr.		
Hayden.	Union.	4,444	1								0.14		0.14	T.	1	17	9	5	s.	Anthony Kappus.		
Johnson's Park.	Colfax.	6,722	1								0.09		0.05	T.	2					Raton Water Co.		
Kappus.		4,000									0.35		0.30	9.0	2					John B. Renesu.		
Lake Alice.	Colfax.	7,160	1								0.00		0.00	0	23	6	2	.....	Wm. Frank, sr.			
Logan.	Quay.	3,851	4	36.9		71	4	9	6†	49	0.00		0.25	4.0	2	15	12	4	sw.	J. G. Buchanan.		
Los Alamos.	San Miguel.	6,789	5								0.32		0.07	0.5	2	15	12	4	sw.	D. N. Jackson.		
Lykins (near).	Roosevelt.	5,000	1								0.14		0.08	0.8	2	15	12	4	sw.	Dr. B. M. Porter.		
Maxwell (near).	Colfax.	5,894	3								0.14		0.14	T.	1	17	9	5	.....	Farmers Development Co.		
Melrose.	Curry.	4,400	2								0.08		0.08	2.0	1	12	11	1	w.	Agent E. P. & SW. R. R.		
Miami Ranch.	Colfax.	6,000	2	33.6		64	2	0	31	53	0.15		0.14	0.14	2	24	5	2	.....	Prof. R. C. Crum.		
Montoya.	Quay.	4,335	1								0.14		0.14	T.	0	19	8	4	sw.	Jose A. Baca.		
Mount Dora (near).	Union.	5,600	1								0.14		0.14	T.	0	19	8	4	sw.	H. A. Nachtrieb.		
Nara Visa.	Quay.	4,225	4	39.4		70	4	13	30	40	0.01		0.01	0.2	1	23	2	6	n.	R. K. Odell.		
Optimo.	Mora.	6,400																				

TABLE 1.—Climatological data for December, 1910. District No. 7, Lower Mississippi Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, .01 inch or more.	Number of partly cloudy days.	Number of clear days.		
Texas—Continued.																			
Denison.	Grayson.	2									1.00		0.36	0.0	3	7	9	15	n.
Finley.	Bowie.										3.20		2.00	0.0	2	10	4	17	e.
Henrietta.	Clay.	915	18	42.1	- 2.2	75	17	15	4†	45	0.68	- 0.35	0.48	0.0	3	11	4	16	s.
Hereford.	Deaf Smith.	3,750	5	39.8		74	10	9	23	54	0.15		0.15	0.0	1	19	12	0	ne.
Lewis Ferry.	Bowie.										4.84		2.00	0.0	6	6	6	6	P. G. Ruff.
Memphis.	Hall.	2,067	5	38.0		58	19†	13	31	41	T.		T.	0.0	0	5	21	5	
Miami.	Roberts.	2,743	4	39.6		65	16	10	23	45†	0.02		0.02	T.	1	14	13	4	s.
Mobeetie.	Wheeler.		16								0.00	- 0.63	0.00	0.0	0	12	14	5	n.
Nazareth.	Castro.		4															J. E. Kinney.	
Ochiltree.	Ochiltree.		2															R. A. Choate.	
Pampa.	Gray.	3,226	1															Rev. P. A. Kaelin.	
Paris.	Lamar.	582	21	44.0	- 2.1	71	27	20	7	41	2.22	- 0.16	0.85	0.0	6	13	4	14	Ft. Worth & Denver Cy. Ry.
Plemons.	Hutchinson.		3	36.8		68	9	7	6†	49	T.		T.	0.0	0	20	5	5	
Quanah.	Hardeman.	1,563	5	43.2		65	19†	21	6	37			0.30	0.0	1	21	2	8	n.
Ringo Crossing.	Hopkins.										4.62		2.71		0.0	4	11	20	R. S. Chamberlain.
Romero.	Hartley.												T.	0	7	19	5	R. A. Gibbs.	
Sherman.	Grayson.	745	17			72	9	11	23	52	T.		T.	0.0	0	10	6	O. M. Pate.	
Sulphur Springs.	Hopkins.																	Ft. Worth & Denver Cy. Ry.	
Texline.	Dallam.	4,694	5			75	9	4	30		0.05		0.05	0.5	1	15	10	6	Lou Muhal.
Tulla.	Swisher.	3,501	12	38.5		65	9	6	55	36	- 0.65	0.21	1.0	0.0	3	13	4	4	J. C. Bostick.
Winfield.	Titus.										6.24		4.00	0.0	6	12	9	10	
Kansas.																			
Alden.	Rice.	1,684																	
Anthony.	Harper.	1,329	13	35.8		61	16	11	7	42		- 0.65	0.17	T.	1	16	0	15	L. B. Wait.
Ashland.	Clark.	1,951	22	36.2	+ 0.6	66	9	3	30	53	0.28	- 0.35	0.09	0.2	5	15	10	6	R. H. Beebe.
Burlington.	Coffey.	1,010	17	32.8	- 1.4	53	14†	9	8	36	1.34	- 0.01	1.03	2.5	3	9	18	C. W. Carson.	
Chanute.	Neosho.	940	6	33.0		56	27	12	2	38			0.67	3.5	3	13	6	O. E. Sanford.	
Cimarron.	Gray.	2,700	4	33.8d		65	9	4	49	15			0.10	T.	2	12	3	Chase W. Brown.	
Coldwater.	Comanche.	2,090	13	36.0d	+ 1.0	63	10	9	6	46	0.32	- 0.30	0.20	1.0	3	19	3	Fred Mallonee.	
Columbus.	Cherokee.	898	20															J. L. Stanley.	
Coolidge.	Hamilton.	3,348	13	32.4	+ 1.1	62	16	5	6	51	0.00	- 0.29	0.00	0.0	0	22	8	O. E. Skinner.	
Cottonwood Falls.	Hamilton.	1,234	6	32.1		56	16	5	8	43	1.18		0.05	1.5	5	14	10	W. R. Padley.	
Council Grove.	Morris.	1,234	1	32.0		58	16	5	8	44	0.54		0.45	1.1	4	21	3	E. B. Greene.	
Cunningham.	Kingman.	1,680	26	36.2	+ 1.5	64	9	7	6	48	0.32	- 0.38	0.32	T.	1	17	5	Jas. Sharpe.	
Dodge City.	Ford.	2,513	36	35.5	+ 3.9	63	9	8	6	44	0.06	- 0.50	0.03	0.3	3	17	9	W. H. Morton.	
El Dorado.	Butler.	1,291	8	33.1		57	9	10	6	40	0.86		0.73	T.	3	21	5	U. S. Weather Bureau.	
Ellinwood.	Barton.	1,790	35	34.2	+ 1.7	64	9	4	6	44	0.14	- 0.57	0.11	T.	3	9	15	W. Y. Miller.	
Emporia.	Lyons.	1,138	29	32.6	+ 0.9	55	16	10	8	35	0.96	- 0.13	0.43	4.0	5	14	10	Martin Musial.	
Eureka.	Greenwood.	1,412	14	33.0		59	9	2	42	1.00	+ 0.14	0.65	1.7	3	21	3	W. H. Boyles.		
Fargo.	Seward.		1														T. C. Peffer.		
Frederia.	Wilson.	864	7	35.4		55	25†	13	8	31	0.94		0.55	3.0	4	21	2	B. W. Holmes.	
Garden City.	Finney.	2,836	21	34.2	+ 2.6	67	9	6	6	53	T.	- 0.62	T.	0	24	4	3	B. F. Stock.	
Greensburg.	Kiowa.	2,235	3	36.2d		45	10	10†	8	46	0.20		0.10	T.	3	20	6	C. C. Raymond.	
Grenola.	Elk.	1,116	23	34.2	- 0.6	59	31	10	3	41	0.53	- 0.54	0.41	1.0	3	18	6	W. H. Lawyer.	
Howard.	do.	1,112	3										0.83		0.67	2	22	J. W. Eby.	
Hugoton.	Stevens.		6	34.3		73	9	5	6	53	0.04		0.05	T.	1	16	10	E. M. Anderson.	
Hutchinson.	Reno.	1,535	20	34.0	- 1.0	62	9	7	6	43	0.41	- 0.50	0.39	T.	2	20	3	F. L. Kenoyer.	
Independence.	Montgomery.	800	37	35.6	- 0.3	57	27†	10	2†	40	0.41	- 1.52	0.36	3.5	3	14	8	U. S. Weather Bureau.	
Iola.	Allen.	984	4	32.6	+ 0.1	52	16	12	8	33	1.14	+ 0.21	0.79	2.4	4	13	11	N. M. Herbig.	
Irene.	Hamilton.	3,440	34	34.3		60	2†	5	6	54	T.		T.	0	18	8	5	J. M. Curran.	
Jetmore.	Hodgeman.	2,368	9	35.1		67	9	4	6	48	0.06		0.04	0.8	2	15	5	B. A. Anawalt.	
Kingman.	Kingman.	1,504	2	35.2		61	9	10	6	42	0.51		0.51	T.	1	18	6	Rodney Torrey.	
La Crosse.	Rush.	2,061	8	34.6		68	9	8	9	40	0.09		0.04	T.	2	3	5	C. H. Longstreth.	
Lakin.	Kearney.	2,993	20	33.3	+ 1.8	65	9	4	6	48	T.	- 0.48	T.	0	21	8	2	H. H. Wolcott.	
Larned.	Pawnee.	2,090	25	34.7		65	9	6	6	44	0.28	- 0.52	0.13	1.2	3	13	9	J. J. Bowman.	
Lebo.	Coffey.	1,138	24	31.6	- 2.4	52	16	7	8	30	1.38	+ 0.10	1.10	2.5	3	16	8	F. W. Schmitt.	
Le Roy.	do.	990	1								1.24		0.76	7.0	5	15	12	R. T. Nichols.	
Liberal.	Seward.	2,843	3	37.0		70	9	8	6	50	T.		T.	0	17	5	9	Mrs. N. Poling.	
Macksville.	Stafford.	2,032	21	34.0	- 1.0	62	9	4	6	43	0.46	- 0.04	0.30	1.0	2	14	10	Ed F. Haberlein.	
McPherson.	McPherson.	1,495	21	33.3	+ 0.2	61	9	5	6	41	0.83	- 0.06	0.64	4.1	2	2	8	C. A. David.	
Madison.	Greenwood.	1,074	9	31.3		55	16	6	8	42	1.46	+ 0.60	0.82	T.	4	17	9	Jerry Forney.	
Marion.	Marion.	1,310	17	32.3	- 1.2	57	16	8	5	40	0.88	- 0.00	0.89	2.0	2	9	S. P. Garrison.		
Medicine Lodge.	Barber.	1,259	17	35.0	+ 0.6	64	9	10	6†	50	0.25	- 0.48	0.22	0.2	2	22	3	H. N. Renfrew.	
Mount Hope.	Sedgwick.	1,410	13								0.62	- 0.24	0.42	0.5	4	19	6	Susan P. Whipple.	
Neosho Rapids.	Lyons.	1,092	5								1.88		0.98	2.0	3	18	13	H. A. Brush.	
Newton.	Harvey.	1,454	13	34.7	+ 1.4	59	9	6	6	38	0.55	- 0.11	0.37	1.2	4	22	5	N. I. Farris.	
Norwich.	Kingman.	1,496	14	36.4	0.0	60	9	11	6	40	0.23	- 0.56	0.23	T.	1	16	9	J. M. Curran.	
Oswego.	Lubbock.	899	16	36.3	- 1.1	58	28	14	2	34	0.42	- 1.70	0.25	2.5	3	13	10	E. J. Henning.	
Plains.	Meade.	2,766	25	35.2		65	9	10	6†	44	0.02		0.02	T.	2	28	2	D. M. Adams.	
Rome.	Summer.	1,218	24	34.7	- 2.4	63	9	10	2†	50	0.76	- 0.25	0.71	0.5	2	21	4	A. Y. Buckles.	
Sedan.	Chautauqua.	534	25	35.6	- 0.4	56	9†	11	2†	41	0.33	- 1.18	0.25	2.5	2	19	7	M. B. Webb.	
Toronto.	Woodson.	1,040	13	33.1	+ 0.4	55	10†	9	2	44	1.38	- 0.09	0.98	3.0	3	20	1	T. W. Marshall.	
Ulysses.	Grant.	3,027	19	33.6 <sup>d</sup>	+ 1.0	62	16	5	6	58	T.	- 0.55	T.	0	15 <sup>m</sup>	1 <sup>m</sup>	R. C. Harlan.		
Walnut.	Crawford.	940	8	34.6		55	28	14	2†	35	0.47		0.26	2.0	4	18	6	U. S. Weather Bureau.	
Wichita.	Sedgwick.	1,377	23	35.1	+ 0.9	58	9	11	6	44	0.36	- 0.10	0.58	1.2	3	14	11	M. B. Light.	
Wichita.	Cowley.	1,124	16	33.6	- 0.2	58	9	11	6	43	0.								

## MONTHLY WEATHER REVIEW.

DECEMBER, 1910

TABLE 1.—Climatological data for December, 1910. District No. 7, Lower Mississippi Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.			Observers.		
				Mean.	Departure from the normal.			Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
					Highest.	Date.	Lowest.														
Oklahoma—Continued.																					
Fairland.	Ottawa.	839	11	37.8	— 0.2	61	27	12	2	39	0.95	— 0.89	0.32	1.0	5	15	5	11	s.	C. W. Prier.	
Fort Gibson.	Muskogee.	556	6								0.75	— 0.44	0.44	T.	5	16	4	11	e.	John T. Welsh.	
Frederick.	Tillman.	1,293	7	42.5		67	27	12	30	41	0.40	— 0.27	0.0	3	18	6	7	n.	B. B. Bradley.		
Gage.	Ellis.	2,136	8	36.2		60	12	8	61	53	0.10	— 0.10	T.	1	26	5	0	n.	C. H. Holmes.		
Goodwell.	Texas.	3,300	1	38.2		72	9	12	17	54	0.03	— 0.03	0.0	1	22	3	3	n.	S. W. Black.		
Guthrie.	Logan.	1,000	8																Geo. W. Derrick.		
Guthrie.	Texas.	3,133	1																A. L. Mordt.		
Harrington.	Roger Mills.	2,200	7	39.8		68	9	14	6	45	0.00	— 0.00	0.0	0	12	6	13	sw.	T. Compton.		
Hartshorne.	Pittsburg.	700	12	42.7	— 2.7	68	17	16	24	46	0.83	— 1.38	0.65	0.0	2	17	4	10	n.	Edward Glendenning.	
Healdton.	Carter.	900	17	42.0	— 0.6	71	27	14	7	46	1.57	— 0.95	0.73	0.0	4	14	13	4	s.	C. H. Heald.	
Helena.	Alfalfa.	1,396	3	37.4		64	16	7	7	45	0.23	— 0.20	T.	2	19	7	5	n.	Frank Horsfall.		
Hennessey.	Kingfisher.	1,166	16	41.2	+ 1.8	62	37	12	17	46	T.	— 1.06	T.	0.0	0	15	6	0	s.	W. W. Parks.	
Hobart.	Kiowa.	1,396	7	41.6		63	27	12	30	38	0.05	— 0.03	0.0	2	10	16	5	n.	Roy Benedict.		
Holdenville.	Hughes.	900	10	40.5	— 0.3	67	17	21	39	40	0.40	— 1.31	0.40	0.0	1	20	4	7	n.	Miss M. Rutherford.	
Hooker.	Texas.	2,999	5	35.4		73	9	4	6	56	0.03	— 0.03	0.0	1	16	5	10	s.	H. N. Kelley.		
Hurley.	Cimarron.	3,000	2	32.6		65	2	3	23	50	T.	— 0.00	T.	T.	0	15	13	3	sw.	C. W. Meyers.	
Idabel.	McCurtain.	474	3																M. L. Henderson.		
Jefferson.	Grant.	1,062	17	34.6	— 2.9	61	16	10	61	49	0.30	— 0.59	0.30	0.0	1	19	6	5	s.	T. E. Beck.	
Kenton.	Cimarron.	4,000	11	37.4	+ 2.0	68	27	23	47	T.	— 0.37	T.	T.	0	19	5	7	n.	L. A. Wilkoff.		
Kingfisher.	Kingfisher.	1,046	13	40.0	+ 0.5	63	16	10	30	40	0.22	— 0.69	0.16	T.	2	19	9	3	n.	J. C. Cross.	
McAlester.	Pittsburg.	698	18	43.8		70	17	20	21	39	0.84	— 1.77	0.75	0.0	3	15	5	11	n.	Wm. Noble.	
McComb.	Pottawatomie.	1,200	16	43.5	+ 3.3	65	10	13	30	44	0.00	— 1.82	0.00	0.0	0	19	6	5	ne.	Jas. E. McNair.	
Mangum.	Greer.	1,585	18	41.0	— 1.1	65	27	12	7	48	T.	— 1.04	T.	0.0	0	19	6	6	n.	M. J. Northcutt.	
Marlow.	Stephens.	1,292	10	41.3	+ 1.0	67	19	15	67	39	0.23	— 0.78	0.13	0.0	2	19	2	10	n.	W. B. Anthony.	
Meeker.	Lincoln.	1,030	17	37.7	— 2.0	75	18	13	27	43	0.09	— 1.73	0.00	0.0	0	17	0	14	s.	Dr. J. B. Baugh.	
Muskogee.	Kiowa.	614	12	40.5	— 0.2	67	17	15	2	38	0.98	— 0.83	0.73	T.	2	9	2	20	n.	Prof. E. N. Collette.	
Mutual.	Woodward.	4	37.7			66	16	10	1	49	0.00	— 0.00	0.0	0	0	20	3	8	s.	Thos. Martin.	
Neola.	Caddo.	1,500	5	40.1		65	18	11	30	44	T.	— 0.00	T.	T.	0	19	8	4	s.	R. N. Schooling.	
Newkirk.	Kay.	1,149	14	38.4	+ 1.2	60	16	12	1	35	0.28	— 0.93	0.28	0.0	1	20	7	4	n.	P. H. Albright & Co.	
Norman.	Cleveland.	1,171	17																Walter II. Meier.		
Oakwood.	Dewey.	1,854	22	38.2		61	24	7	30	45	0.03	— 0.03	T.	1	20	6	5	n.	Dr. F. P. Osborn.		
Okeene.	Blaine.	1,194	7	39.4		63	16	12	6	46	0.04	— 0.04	T.	1	22	5	4	s.	Dr. L. H. Murdoch.		
Oklahoma.	Oklahoma.	1,247	21	39.8	+ 1.2	64	27	14	6	34	0.03	— 1.71	T.	1	18	9	4	s.	U. S. Weather Bureau.		
Oklmulgee.	Oklmulgee.	752	8																J. L. Maynard.		
Pauls Valley.	Garvin.	880	11																A. M. Foss.		
Pawhuska.	Osage.	918	12	38.1	— 1.0	76	26	10	30	55	0.12	— 1.37	0.07	0.5	2	17	9	5	nw.	R. C. Block.	
Perry.	Noble.	1,000	13	39.4	— 0.8	63	27	13	6	37	0.08	— 1.06	0.08	T.	1	21	4	6	n.	J. A. Douglass.	
Ravilla.	Johnston.	796	9	43.6		69	10	15	2	40	1.69	— 1.69	0.90	0.0	3	18	7	6	n.	R. G. Gaptill.	
Sac and Fox Agency.	Lincoln.	900	18	41.0	+ 0.8	65	27	15	30	41	0.05	— 1.99	0.05	0.0	1	22	4	5	n.	D. B. Taylor.	
Shawnee.	Pottawatomie.	1,041	10	38.6	+ 1.0	65	17	15	30	39	0.15	— 0.89	0.12	0.0	2	14	8	9	nw.	Neal R. Clark.	
Snyder.	Kiowa.	1,356	4	42.6		66	27	11	30	45	0.15	— 0.14	0.14	0.0	2	18	10	3	se.	Dr. W. G. Woodward.	
Stillwater.	Payne.	880	18	37.2	— 0.9	66	27	4	31	47	T.	— 1.24	T.	0.0	0	16	8	7	n.	J. M. Speidel.	
Supply.	Woodward.	2,100	3																A. H. Trumbo.		
Tulsa.	Tulsa.	700	22	38.8		63	27	13	30	43	0.16	— 1.57	0.12	T.	2	20	5	6	s.	Wm. Hall.	
Vinita.	Craig.	698	7																C. E. Lohman.		
Wagoner.	Wagoner.	588	14	38.6	— 0.7	64	17	13	2	40	0.48	— 1.05	0.35	1.0	3	21	1	9	s.	S. L. Hatfield.	
Waukomis.	Garfield.	1,258	14	38.6	— 1.0	62	19	8	30	42	0.06	— 0.83	0.08	T.	1	25	5	4	n.	R. C. Shades.	
Waukika.	Jefferson.	988	10	43.8		71	27	19	6	36	1.68	— 0.50	0.50	T.	4	19	5	7	n.	B. A. Swindler.	
Wetherford.	Custer.	1,639	9	39.4	+ 1.0	64	16	14	6	46	0.05	— 0.49	0.03	T.	2	16	6	9	n.	M. D. Reed.	
Webbers Falls.	Muskogee.	479	12	37.6	— 1.0	64	27	11	9	49	2.08	— 0.09	1.98	0.0	2	8	16	7	e.	B. D. Bouleman.	
Whiteagle.	Kay.	945	5	39.2		68	31	12	30	48	T.	— 0.00	T.	0.0	0	23	2	6	n.	J. M. Dankwardt.	
Woodward.	Woodward.	1,886	1	36.6		64	9	7	6	52	0.01	— 0.01	T.	0.0	1	22	7	2	s.	R. A. Boyle.	
Missouri.	Maries.	18	32.2	— 1.6		60	17	9	21	42	0.70	— 1.65	0.60	T.	2	13	9	9	n.	A. J. Wofford.	
Belle.	Shannon.	1,200	17	34.3	— 1.6	56	28	14	61	36	2.34	— 0.25	0.90	9.0	0	21	3	7	s.	V. H. Kirkendall.	
Birch Tree.	Cape Girardeau.	305	5								1.68	— 0.02	0.00						D. L. Albert.		
Cape Girardeau.	Pemiscot.	20	37.2	— 2.2		66	28	14	21	35	3.58	— 1.21	2.85	7.0	6	18	3	10	e.	H. E. Averill.	
Carutherville.	McDonald.	11	36.2	— 1.9		65	17	10	27	47	0.87	— 1.33	0.42	T.	4	22	1	8	n.	H. E. Dean.	
Doniphian.	Ripley.	440	6	35.2		60	27	14	21	33	1.70	— 0.90	0.90	4.0	5	14 <sup>a</sup>	11 <sup>b</sup>		W. W. Martin.		
Farmington.	St. Francois.	889	3																Miss Carrie Sneed.		
Gano.	Dent.	7	33.2			57	17	9	24	31	1.59	— 0.67	4.8	5	20	3	8	nw.	A. C. Leech.		
Goodland.	Iron.	900	5	32.5		59	17	1	24	42	1.93	— 0.71	0.8	5	20	0	11	n.	F. M. Adams.		
Greenville.	Wayne.	16	33.8	— 2.1		63	28	— 1	7	44	2.29	— 0.51	1.03	5.0	6	17	11	3	s.	A. G. Templeton.	
Hollister.	Taney.	1,000	32	32.2	— 2.1	55	27	— 5	7	46	2.25	— 0.76	1.00	6.5	6	12	7	12	nw.	W. P. Chapman.	
Ironton.	Cape Girardeau.	458	19	34.6	— 1.8	63	23	4	7	34	2.24	— 1.09	0.98	8.2	5	15	5	11	n.	W. II. Delano.	
Jackson.	Jasper.	979	32	36.0		67	17	17	1	47	3.48	— 1.82	0.37	0.1	3	21	0	10	se.	L. M. Bean.	
Joplin.	Oregon.	911	10	36.6		57	17	15	13	30	2.84	— 0.23	0.98	5.5	7	16	7	8	se.	Miss Juliette Derrin.	
Koshkonong.	Lamar.</																				

TABLE I.—Climatological data for December, 1910. District No. 7, Lower Mississippi Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Arlie.	Lawrence.	6																	
Arlie.	Clark.	250	18	42.4	-0.7	67	18	12	7	45	5.15	+1.23	3.75	T.	8	16	6	9	sw.
Arkadelphia (near).	do	250	3	44.5		72	28	17	7	34	4.44	-0.38	2.05	0.0	7	12	6	13	sw.
Arkansas City.	Desha.	145	27								3.91		1.64	0.0	8				
Batesville.	Independence.	271	7								2.94		1.82	1.0	6				
Bee Branch.	Van Buren.	18	18	40.4	-2.9	66	10	16	21	38	3.65	+0.17	2.10	0.5	6	18	0	13	n.
Benton.	Saline.	283	3	43.6		70	28	20	21	38	5.00		3.30	0.0	3	15	5	11	s.
Bergman.	Benton.	1,303	5	36.8	-0.7	62	17	15	2	36	0.89	-1.87	0.34	1.2	6	18	4	9	nw.
Black Rock.	Boone.	1,324	14	32.7	-4.8	61	17	9	7	44	1.39	-1.13	0.45	1.5	7	18	4	9	nw.
Brinkley.	Lawrence.	6									3.17		1.39	0.5	6				
Calico Rock.	Monroe.	226	24	39.3	-5.0	66	28	15	21	42	5.29	+0.73	2.08	0.5	7				
Camden.	Izard.	361	6								2.58		0.80	0.0	6				
Centerpoint.	Ouachita.	158	25	45.4	-0.4	75	28	14	7	38	4.14	-0.40	1.78	0.0	10	12	2	17	nw.
Clarendon.	Howard.	10	45.0	-0.3	73	28	16	7	38	6.00	+1.51	3.30	0.0	4	10	7	14	ne.	
Conway.	Monroe.	171	6								5.15		2.47	0.1	7				
Corning.	Faulkner.	309	27	39.8	-2.6	68	28	17	2	34	4.37	+0.47	2.99	0.2	6	11	12	8	se.
Dardanelle.	Clay.	293	18	37.0	-0.8	65	28	13	7	34	3.38	-0.16	1.85	7.2	8	13	7	11	nw.
Dodd City.	Yell.	330	24	46.6		64	10	15	21	39	2.62	-0.51	1.20	0.0	7				
Dutton.	Marion.	1,175	29	35.5 <sup>e</sup>	-4.0	62		12		36 <sup>e</sup>	1.93	-1.07	0.95	5.0	5				n.
Earl.	Madison.	9																	
El Dorado.	Crittenden.	4																	
England.	Union.	265	6	44.2		74	28	18	7	37	3.92		1.79	0.0	11				
Eureka Springs.	Lonoke.	4	41.6 <sup>e</sup>			68		16		34 <sup>e</sup>	4.39		1.95	T.	3				
Fayetteville.	Carroll.	9	37.2			62	84	15	2	41	0.84		0.33	0.5	3	7	17	7	sw.
Fort Smith.	Washington.	1,451	21	38.8	-0.6	63	17	15	24	40	0.75	-2.06	0.50	0.5	3	13	4	14	sw.
Fulton.	Sebastian.	481	28	41.5	-0.2	65	27	21	7	30	0.50	-2.29	0.31	T.	5	13	7	11	e.
Hempstead.	Sharp.	264	6								5.16		2.00	0.0	8				
Hardy.	Phillips.	643	12	37.7	-4.9	60	28	15	14 <sup>f</sup>	35	4.09	+0.80	1.52	8.0	7	8	11	12	nw.
Helena.	Garland.	182	25	40.4	-4.7	64	10 <sup>f</sup>	18	21	36	2.95	-2.06	1.10	T.	6				
Hot Springs.	Union.	600	4	42.8		67	28	16	21	36	5.39		3.22	0.0	4	12	12	7	n.
Huttig.	Craighead.	85	3	45.6		75		17		35 <sup>e</sup>	4.37		1.75	0.0	8				
Jonesboro.	Junction.	345	15	37.6	-3.4	70	28	15	14 <sup>f</sup>	40	4.26	-0.30	2.00	2.4	6	4	7	20	nw.
Lake Farm.	Jefferson.	195	3	40.4		66	18	11	21	44	5.43		3.42	T.	3	7	4	20	n.
Lewisville.	Lafayette.	262	7	46.9		73		18		34 <sup>e</sup>	4.14		2.00	0.0	8				
Little Rock.	Pulaski.	357	31	42.3	-1.2	68	28	23	7	37	5.40	+1.16	3.48	T.	7	13	3	15	nw.
Lutherville.	Johnson.	775	13	39.2	-1.7	65	10 <sup>f</sup>	17	7	34	2.09	-1.50	1.10	0.0	4	15	8	8	sw.
Malvern.	Hot Spring.	277	23	43.0	-1.1	68	28	18	7	33	5.22	+1.30	2.10	T.	10				
Mammoth Spring.	Fulton.	6	34.1			59	28	11	7	38	2.86		1.05	6.0	6	12	10	9	
Marked Tree.	Poinsett.												1.68	1.8	6				
Mena.	Polk.	1,100	24	42.6	-0.1	66	17	20	7	34	2.56	-1.33	1.33	T.	7	15	6	10	nw.
Mossdale.	Newton.	17	36.6	-0.1	59	17	15	1	32	0.94	-2.76	0.57	0.0	3	14	2	15	s.	
Newport.	Jackson.	231	26								4.25	+0.68	2.46	1.0	6				
Ozark.	Franklin.	377	19	40.9	-1.6	64	18	19	17	35	1.62	-1.81	0.47	0.5	19	5	7	e.	
Pine Bluff.	Jefferson.	215	22	43.8	-1.5	63	27	19	2	33	4.72	+0.01	1.85	T.	8				
Pocahontas.	Randolph.	18		37.2	-1.1	63	19 <sup>f</sup>	10	7	36	2.97	-0.56	1.65	4.5	5	20	4	7	
Pond.	Benton.	1,260	13	36.2	-1.3	64	17	11	24	42	0.93	-1.20	0.36	1.0	4	12	8	11	sw.
Portland.	Ashley.	122	1	44.0		74	28	17	2	38	4.80		1.80	0.0	13				
Prescott.	Nevada.	327	32	42.4	-1.2	73	28	14	7	42	5.59	+1.91	1.86	0.0	10				
Rogers.	Benton.	1,385	19	38.0	0.0	63	17	14	24	42	0.80	-1.32	0.42	0.3	5	19	2	10	s.
Springbank.	Miller.	182	3								4.32		1.36	0.6	6				
Stuttgart.	Arkansas.	495	23	40.6	-3.6	69	28	16	21	34	4.31	-0.25	1.68	T.	5	17	2	12	n.
Subiaco.	Logan.	1,050	13	41.3	-0.3	66	28	19	7	32	1.67	-1.73	0.93	T.	4	16	4	11	ne.
Texarkana.	Miller.	332	26	44.4	-2.9	73	28	23	24	37	4.51	+1.88	2.00	0.0	6				
Warren.	Bradley.	304	15	42.9	-1.8	75	28	17	7	36	4.36	-0.85	1.16	0.0	10				
Whitecliffs.	Little River.	206	6								5.33		2.00	0.0	9				
Wiggs.	Garland.	17	41.0	-0.9	69	28	13	24	40	3.98	-0.12	2.28	T.	7	9	10	12	nw.	
Wynne.	Cross.	2	40.8			68	27	15	21	44	4.76		2.00	0.9	7				
<i>Mississippi.</i>																			
Anguilla.	Sharkey.	107	2	46.3		72	28	21	7	31	3.49		1.73	T.	7	10	1	20	nw.
Austin.	Tunica.	200	14																
Batesville.	Panola.	230	23	40.8	-3.6	69	28	16	21	36	3.81	-0.88	1.52	0.0	5	13	1	17	e.
Big Creek.	Calhoun.			42.2 <sup>f</sup>		68		18	2	33	3.65		1.93	0.0	5	6	7	1	
Byhalia.	Marshall.	390	1								3.55		1.57	1.5	5	15	4	12	n.
Canton.	Madison.	228	20	46.8	-1.6	73	27	23	24	32	3.48	-1.39	1.57	0.0	10	7	14	10	ne.
Charleston.	Tallahatchie.										3.97		1.82	0.0	3	15	3	13	nw.
Clarksville.	Coahoma.	177	3	41.1		71	28	19	21	37	3.08		1.12	T.	8	7	4	20	n.
Coffeyville.	Yalobusha.	241	1								4.47		1.85	0.0	10	14	8	9	se.
Corinth.	Alcorn.	470	22	38.4	-4.3	66	28	16	21	38	3.76	-1.72	1.42	T.	8	14	0	17	se.
Crenshaw.	Panola.	187	1								3.05		1.50	0.8	9	12	8	11	nw.
Denmark.	Lafayette.										4.81		1.75	0.6	7				
Duck Hill.	Montgomery.	11	43.2	-2.2	70	27	16	2	34	3.79	-0.61	1.85	T.	4	10 <sup>f</sup>	7	11	s.	
Edwards.	Hinds.	222	23	48.4	-1.1	71	29	23	7	34	3.52	-1.46	1.60	0.0	10	7	8	16	s.
Enid.	Tallahatchie.	1									3.06		1.47	0.0	7				
Fayette.	Jefferson.	270	9	49.4	-0.8	72	5 <sup>f</sup>	22	7	33	3.41	-1.56	1.80	0.0	6	8	8	15	nw.
Greenville.	Washington.	126	23	44.6	-2.1	73	27	22	21	36	4.67	+0.14	1.62	0.0	13	12	0	19	ne.
Greenwood.	Leflore.	140	10	42.6	-2.6	72	27	19	21	36	3.08	-2.71	1.44	0.0	11	11	6	14	ne.
Grenada.	De Soto.	194	1								3.32</td								

## MONTHLY WEATHER REVIEW.

DECEMBER, 1910

TABLE I.—Climatological data for December, 1910. District No. 7, Lower Mississippi Valley—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.	Prevailing wind direction.	Observers.					
				Mean.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unheated.	Number of rainy days, 0.1 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Mississippi—Cont'd.</i>																			
Vicksburg.	Warren.	247	39	48.3	-1.1	72	27	28	7	29	4.09	-0.93	1.67	T.	10	7	5	19	se.
Water Valley.	Yalobusha.	200	21	42.6	-3.3	69	28	18	12	34	3.45	-1.41	1.55	T.	6	14	7	10	ne.
Woodville.	Wilkinson.	500	17	50.2	-0.7	75	28	21	8	32	5.32	-0.15	1.80	0.0	13	10	13	8	n.
Yazoo City.	Yazoo.	116	16	46.2	-1.1	72	28	19	2	36	3.88	-0.48	1.66	0.0	8	11	3	17	se.
<i>Louisiana.</i>																			
Abbeville.	Vermilion.	18	22	54.1	+ 0.3	80	10	24	7	34	4.24	-0.35	2.65	0.0	10	6	5	15	se.
Alexandria.	Rapides.	77	19	49.2	-0.3	75	47	20	7	42	4.42	-0.58	1.57	0.0	8	9	6	22	s.
Anite.	Tangipahoa.	130	22	52.0	+ 0.9	77	27	19	12	48	4.97	+ 0.09	1.80	0.0	7	4	14	13	n.
Baton Rouge.	E. Baton Rouge.	35	22	54.5	+ 2.6	75	107	30	7	47	4.17	-0.64	2.50	0.0	11	9	1	21	nw.
Burnsides.	Ascension.	20	10	51.6	-1.6	78	10	23	7	32	5.08	-0.68	2.60	0.0	9	6	9	16	e.
Burrwood.	Plaquemines.	1	20	57.4	-1.3	74	5	37	21	53	1.68	-1.21	0.0	0	5	13	6	12	ne.
Cades.	St. Martin.																		
Calhoun.	Ouachita.	180	17	47.8	+ 0.9	74	28	18	7	36	6.41	+ 0.70	2.20	0.0	9	9	3	18	ne.
Cameron.	Cameron.	6	15	55.6	+ 0.7	70	97	31	6	30	4.79	+ 1.71	2.30	0.0	5	4	5	22	se.
Carrollton.	Orleans.																		
Cheneyville.	Rapides.	67	20	53.6	+ 3.5	77	11	21	7	43	5.40	+ 0.66	2.70	0.0	5	10	0	21	n.
Cinclare.	W. Baton Rouge.																		
Clinton.	East Feliciana.	113	20	50.9	-0.5	75	28	23	2	33	3.84	-0.94	1.29	0.0	9	9	6	15	n.
Collinston.	Morehouse.	65	8																
Covington.	St. Tammany.	39	17	50.6	-0.1	76	107	22	24	43	3.82	-1.16	1.56	0.0	11	12	2	17	n.
Dodson.	Winn.	1	49.2																
Donaldsonville.	Ascension.	33	20	56.0	+ 1.5	85	1	28	7	50	5.50	+ 2.88	5.10	0.0	6	12	3	16	nw.
Farmerville.	Union.	177	20	45.2	-1.7	73	16	16	3	43	5.06	+ 0.14	2.56	0.0	3	10	2	19	s.
Ferriday.	Concordia.	3	49.8																
Franklin.	St. Mary.	10	18	54.4	+ 1.0	78	107	25	7	41	4.95	-1.55	1.63	0.0	10	12	0	19	s.
Grand Cane.	De Soto.	302	4																
Grand Coteau.	St. Landry.	93	23	54.2	+ 0.4	80	10	24	7	30	5.17	+ 0.62	2.10	0.0	11	18	11	10	nw.
Hammond.	Tangipahoa.	44	15	52.0	+ 0.3	80	10	20	2	40	3.81	-0.79	1.83	0.0	7	13	15	3	se.
Houma.	Terrebonne.																		
Jena.	Catahoula.																		
Jennings.	Calcasieu.	30	12	52.4	+ 0.4	79	10	25	7	39	4.08	-0.41	1.80	0.0	11	8	11	12	ne.
Lafayette.	Lafayette.	36	21	52.8	+ 0.1	80	10	24	7	35	4.16	-0.26	2.57	0.0	10	8	9	14	e.
Lake Charles.	Calcasieu.	22	22	52.3	-0.9	79	10	22	7	38	2.15	-1.76	1.55	0.0	3	22	0	9	n.
Lakeside.	Cameron.	9	18	55.2	+ 1.4	77	28	27	7	34	5.60	-2.65	0.0	0	6	20	1	10	sc.
Lawrence.	Plaquemines.																		
Leesville.	Vernon.	2	21	51.8		79	47	19	7	39	5.24	-1.58	0.0	0	12	15	10	6	s.
Liberty Hill.	Bienville.	23	33	50.0	+ 0.4	77	4	18	7	38	3.55	-1.39	1.97	0.0	4	8	3	20	sc.
Logansport.	De Soto.	193	6																
Melville.	St. Landry.	45	21	49.8	-3.4	75	10	19	27	45	4.71	-0.04	1.98	0.0	10	12	0	19	se.
Minden.	Webster.	194	18	46.8	-0.5	77	4	20	7	40	4.24	-0.81	1.98	0.0	9	8	2	21	s.
Monroe.	Ouachita.	82	22	48.0	-1.8	79	10	22	14	45	4.90	+ 0.42	2.00	0.0	6	12	2	17	n.
Morgan City.	St. Mary.	14	5																
Newellton.	Tensas.																		
New Iberia.	Iberia.	15	20	55.3	+ 0.5	75	10	28	7	33	3.81	-0.54	2.60	0.0	7	7	6	18	sw.
New Orleans (1).	Orleans.	51	40	54.1	-0.3	76	5	34	7	30	3.45	-1.01	1.57	0.0	9	11	11	11	e.
New Orleans (2).	.do.	18	21	54.5	+ 0.7	76	5	26	7	38	3.70	-1.45	1.47	0.0	8	7	20	20	e.
Opelousas.	St. Landry.	83	18	51.6	+ 0.5	78	28	22	7	39	5.30	+ 0.34	2.75	0.0	8	9	2	20	e.
Paradis.	St. Charles.																		
Plain Dealing.	Bossier.	268	18	48.4	+ 1.9	78	28	22	2	45	3.77	-1.64	1.35	0.0	8	9	8	14	ne.
Rayne.	Acadia.	44	18	54.6	+ 1.6	80	10	24	7	33	3.29	-1.44	1.25	0.0	8	11	0	20	n.
Reserves.	St. John Baptist.																		
Robeline.	Natchitoches.	8	55.2																
Ruston.	Lincoln.	147	13	49.0	+ 2.0	78	4	19	27	45	4.30	+ 0.45	2.15	0.0	7	8	2	21	e.
St. Francisville.	West Feliciana.	312	13	49.8	+ 1.8	80	28	23	7	37	4.20	-0.63	2.20	0.0	2	8	3	20	sw.
Schreveport.	Terrebonne.	115	6	52.4		79	18	24	7	42	5.97	-3.50	0.0	0	4	12	19	0	n.
Shreveport.	Caddo.	17	17																
Simmesport.	Avoyelles.	249	39	48.8	-0.1	76	4	25	7	32	3.74	-0.07	1.60	0.0	9	7	14	se.	
Southern Univ. Farm.	Jefferson.																		
Sugartown.	Calcasieu.																		
Tallulah.	Madison.	91	2	47.8		79	87	15	1	42	4.73	-1.59	0.0	0	4	2	26	3	se.
Walker.	Livingston.																		

\*, \*\*, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

\*\* Temperature included in that of the next measurement.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

‡ Separate dates of falls not recorded.

§ Data are from standard instruments not supplied by the U. S. Weather Bureau.

|| Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

Estimate by observer.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

U. S. Weather Bureau.

C. T. Leigh.

F. L. St. Martin.

G. W. Richardson.

G. E. Speed.

H. C. Fondren.

La. Meadows Co.

Leon Sanders.

A. P. McNeil.

Leon Godchaux Co., Ltd.

Ruby McCook.

J. C. H. McKinney.

L. P. Kilbourne.

Chas. V. Moore.

U. S. Weather Bureau.

C. T. Leigh.

F. L. St. Martin.

G. W. Richardson.

G. E. Speed.

H. C. Fondren.

TABLE 2.—*Daily precipitation for December, 1910. District No. 7, Lower Mississippi Valley.*

TABLE 2.—*Daily precipitation for December, 1910. District No. 7, Lower Mississippi Valley—Continued.*

TABLE 2.—*Daily precipitation for December, 1910. District No. 7, Lower Mississippi Valley—Continued.*

TABLE 2.—*Daily precipitation for December, 1910. District No. 7, Lower Mississippi Valley—Continued.*

TABLE 2—*Daily precipitation for December, 1910. District No. 7, Lower Mississippi Valley—Continued.*

## MONTHLY WEATHER REVIEW.

DECEMBER, 1910

TABLE 3.—Maximum and minimum temperatures at selected stations, December, 1910. District No. 7, Lower Mississippi Valley.

Date.	Colorado.						New Mexico						Texas						Kansas.						Oklahoma.					
	Lamar.		Leadville.		Pueblo.		Albert.		Chimarron.		Amarillo.		Panhandle.		Dodge City.		Ellinwood.		Iola.		Liberal.		Wichita.		Ardmore.		Bartlesville.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.	42	14	42	19	41	19	49	25	50	21	50	23	46	27	39	16	37	10	34	15	41	13	35	16	45	25	48	18		
2.	60	22	44	19	55	22	55	32	61	27	60	23	51	26	54	18	46	17	43	13	47	16	46	20	54	23	45	14		
3.	62	20	36	27	55	30	58	24	62	31	60	38	62	21	53	32	49	18	46	17	50	25	51	32	63	40	48	35		
4.	59	24	31	14	58	28	65	34	61	32	72	37	70	35	49	24	40	25	29	23	47	23	33	26	53	41	36	30		
5.	53	25	17	5	48	20	50	21	57	27	47	20	43	37	35	16	32	22	30	25	44	26	39	22	40	31	34	32		
6.	51	8	36	1	57	14	51	18	55	6	47	21	43	30	52	8	40	4	30	19	55	8	35	11	42	20	35	17		
7.	45	12	31	14	47	21	61	32	59	17	47	29	58	20	37	15	38	13	33	18	60	16	33	20	58	22	42	19		
8.	52	15	31	6	52	19	59	29	54	15	57	20	57	21	57	14	50	15	35	12	60	13	42	13	54	29	45	20		
9.	60	43	31	26	67	25	70	32	65	22	73	31	57	30	63	30	64	20	45	15	70	20	58	24	60	25	61	34		
10.	59	16	37	26	48	24	61	32	56	20	66	32	54	29	57	29	50	27	58	23	52	36	63	40	57	35	55			
11.	53	34	34	26	51	26	60	34	63	17	61	31	53	45	43	26	45	31	41	27	44	28	43	35	56	36	42	29		
12.	49	19	37	17	40	22	50	22	51	13	39	30	46	45	36	31	31	36	24	52	28	38	32	47	40	51	35			
13.	39	30	30	11	36	24	43	32	40	19	37	31	36	34	39	28	43	29	41	16	36	27	37	33	45	26				
14.	51	16	40	3	49	17	52	25	47	25	44	32	43	32	56	24	56	25	50	23	54	26	41	31	55	20				
15.	52	22	42	10	51	21	53	27	50	26	47	29	60	34	48	27	50	25	48	30	50	24	54	35	50	34				
16.	57	15	44	13	63	21	60	25	59	12	61	27	60	36	62	21	59	22	52	19	64	18	57	25	60	32	59	19		
17.	55	12	43	11	45	18	55	25	50	20	51	25	68	37	52	21	51	15	48	26	53	18	50	25	58	35	59	29		
18.	56	14	40	12	44	20	55	25	49	19	46	23	55	40	49	19	50	19	49	22	54	18	49	26	59	36	55	23		
19.	57	18	42	14	50	20	60	26	51	11	57	24	64	32	56	23	55	28	51	32	64	24	54	31	60	29	58	34		
20.	55	24	38	12	49	20	51	28	45	19	57	34	55	29	49	26	49	20	38	18	57	28	43	26	53	34	55	28		
21.	53	31	20	10	42	31	51	28	43	14	53	32	48	32	46	31	38	24	41	17	56	33	40	23	52	35	45	17		
22.	41	23	18	6	36	18	47	26	37	19	44	29	48	32	45	24	45	25	47	27	43	28	45	27	58	43	55	40		
23.	42	8	29	1	42	10	55	17	46	7	50	18	49	31	49	13	44	14	37	21	50	10	41	20	50	26	46	23		
24.	58	16	33	12	62	16	60	27	60	14	59	24	51	25	55	22	50	13	42	16	60	20	49	19	63	28	50	20		
25.	50	24	27	14	39	26	67	27	40	19	49	33	64	28	50	25	50	18	50	34	51	34	60	20	57	30				
Mns.	51.3	18.5	32.2	10.7	48.6	20.2	55.0	26.0	51.6	16.8	52.3	27.5	55.3*	32.7	49.6	22.4	46.6	21.7	42.4	22.8	52.6	21.3	44.5	25.6	53.9	32.3	49.5	26.7		

Date.	Oklahoma.												Missouri.												Tennessee.											
	Enid.		McAlester.		Mangum.		Muskeg.		Oklahoma.		Weatherford.		Woodward.		Caruthersville.		Ironton.		Lamar.		Olden.		Springfield.		Lynnville.		Jackson.									
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1.	50	20	43	23	44	22	39	17	39	19	46	22	50	13	39	22	34	18	36	16	35	17	31	16	40	24	42	27	33	24						
2.	57	26	55	20	57	22	49	15	52	24	54	21	58	11	43	17	40	15	45	14	43	12	41	6	49	29	54	33	43	23						
3.	60	21	59	39	60	24	60	37	57	39	56	29	57	20	47	23	43	18	48	17	49	27	52	26	51	37	45	26	51	33						
4.	40	22	51	40	57	36	51	38	44	32	34	34	49	27	41	25	38	20	32	17	40	27	32	25	32	26	36	24	42	32						
5.	34	30	43	32	36	35	38	30	39	26	38	27	41	23	34	30	36	26	30	29	32	24	32	24	32	24	32	24	42	32						
6.	44	14	42	26	44	17	36	24	39	14	27	14	52	7	32	27	31	24	32	28	20	26	21	37	19	43	27	53	33							
7.	50	14	56	26	55	12	55	20	54	17	57	15	46	9	41	21	41	15	40	21	41	16	37	16	45	26	51	33	43							
8.	51	17	55	23	51	22	48	21	47	17	57	18	57	10	43	21	41	11	40	19	45	21	41	21	45	26	51	23	45							
9.	50	17	62	23	62	21	57	21	58	27	56	33	64	13	45	20	48	8	52	19	46	24	50	23	51	33	51	23								
10.	60	20	60	45	55	22	60	40	57	29	58	33	57	27	57	31	50	33	55	22	54	36	49	34	59	30	59	30								
11.	64	21	55	32	60	30	55	28	54	33	57	25	50	23	45	26	45	26	41	27	47	27	39	31	48	25	53	25								
12.	45	24	50	43	56	36	51	44	46	40	46	35	47	30	37	29	34	20	38	8	41	18	39	14	45	22	53	32								
13.	46	22	45	37	50	26	48	33	43	34	40	31	40	29	37	30	38	8	41	18	39	14	45	22	53	32										
14.	50	30	46	31	48	36	48	23	44	36	49	35	50	37	5																					

TABLE 3.—*Maximum and minimum temperatures at selected stations, December, 1910. District No. 7, Lower Mississippi Valley—Continued.*

## Mississippi.

## Louisiana.